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Region V's Guidance for Developing a State Malfunction Notification and Correction Program

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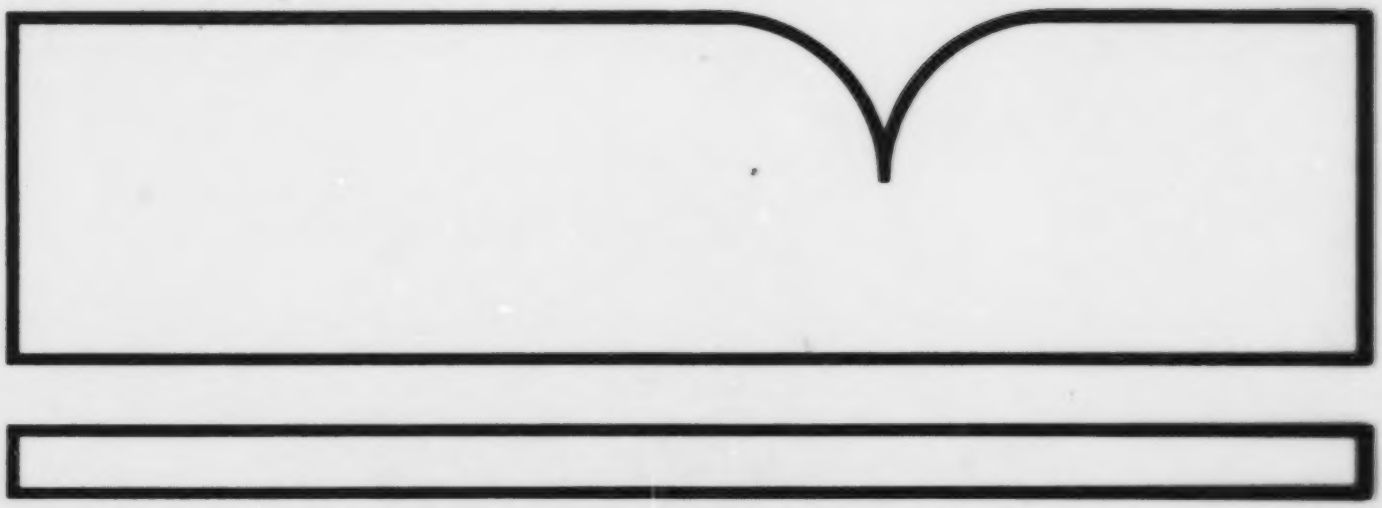

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This report is intended to summarize the development of the United States Environmental Protection Agency, Region V's malfunction policy, Region V's States malfunction regulations and to provide assistance to the States outside of Region V in reviewing their malfunction regulations.

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December, 1980

REGION V's GUIDANCE FOR DEVELOPING A STATE MALFUNCTION NOTIFICATION AND CORRECTION PROGRAM

by
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This report is issued by the United States Environmental Protection Agency (USEPA) Region V to inform a limited number of citizens and governmental agencies about regional guidance on the technical issue of malfunction.

Copies are available (in limited quantities) from USEPA, Region V; or for a fee, from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161.

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Purpose and Introduction

This report is intended to summarize the development of the malfunction policy of the United States Environmental Protection Agency (USEPA) Region V, Region V's States' malfunction regulations and to assist other States outside of Region V with the review of their malfunction regulations.

Region V's malfunction policy was announced in the promulgation of the Ohio Sulfur Dioxide Plan (41 FR 36324, August 27, 1976). The USEPA's malfunction policy was restated in the Utah Sulfur Dioxide Control Strategy for a Kennocott Copper Corporation smelter located in Salt Lake City, Utah (42 FR 21472, April 27, 1977). In the Idaho Sulfur Dioxide Control Strategy for the Bunker Hill Company smelter located in Kellogg, Idaho (42 FR 58171, November 8, 1977), the USEPA Administrator affirmed the USEPA malfunction policy promulgated in the Utah Sulfur Dioxide Control Strategy and indicated that the USEPA was reviewing all State implementation plans to verify that all malfunction regulations were adequate and consistant with the USEPA policy. During 1978, USEPA provided national guidance on malfunction in the Workshops on Requirements for Nonattainment Area Plans. Also in 1978, Region V sent all of the States in Region V a sample regulation as guidance in reviewing their current malfunction regulations. This report also contains a summary of each of Region V's States' action on malfunction.

Malfunction Policy Introduction

To accomplish the goals of the Clean Air Act, the States have established air pollutant emission limitations. To achieve and maintain compliance with these limitations, industries and utilities have installed air pollution control equipment. As the air pollution control equipment ages, it like all of man's creations commences to deteriorate and fail. With this deterioration, the pollution source and the related air pollution control equipment may no longer be in continuous compliance. To prevent the deterioration and maintain compliance, many of the industries and utilities have started preventive maintenance programs. Even with an excellent preventive maintenance program, there are instances where the equipment malfunctions and the resulting pollutant emissions are unavoidable. The USEPA and the States hesitate to penalize the industries and utilities for these unavoidable emissions. However, industries and utilities must be in compliance with the emission standards except during periods of these unavoidable emissions. To achieve this goal of nonpenalty, the USEPA has established a malfunction policy for periods of unavoidable excess emissions.

Definition of Malfunction

Before one may develop a malfunction policy, the term, malfunction, has to be defined. This have been accomplished by the USEPA in 40 CFR 60.2(q), definitions section of the Standards of Performance for New Stationary Sources, which defines malfunction as meaning "any sudden and unavoidable failure of air pollution control equipment or process equipment or a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions."

It should be noted that excess emissions due to scheduled maintenance are not defined as a malfunction and are considered at all times to be a violation of the applicable standard.

Malfunction Policy

To correct deficiencies in the sulfur dioxide (SO2) Ohio Implementation Plan, the USEPA on August 27, 1976 (41 FR 36324) promulgated substitute SO2 regulations designed to attain and maintain the national ambient air quality standards (NAAQS) in Ohio. As an integral part of the plan, the USEPA addressed the issue of malfunction. The USEPA Region V's position was that a source can raise the issue of malfunction in enforcement proceedings under Section 113 of the Clean Air Act. Then after reviewing the source's explanation of the excess emissions and if the USEPA found that the equipment was well maintained and operated, was repaired expeditiously, and that excess emissions were minimized, USEPA would likely take no further enforcement action against the source. For further details, the full text of the malfunction section from the Ohio SO2 Implementation Plan is given in Appendix A.

The USEPA malfunction policy was promulgated on April 27, 1977 (42 FR 21472) as a regulation related to excess emissions due to start-up, shutdown and malfunction at the Kennecott Copper Corporation smelter located in Salt Lake City, Utah. The intend of this regulation was to attempt to reduce the number and the extent of the excess emissions, encourage good operating and maintenance practices, and to notify the company that all periods of excess emissions regardless of cause were violations, however, that the USEPA intended to use enforcement discretion during periods of malfunctions. The regulation required Kennecott Copper to supply the USEPA the following information when there were periods of excess emissions:

1. Identification of the emission point(s);
2. The magnitude of the excess emissions;
3. The identity of the process or control equipment causing the excess emissions;
4. The cause and nature of the excess emissions; and
5. A description of the steps taken by the source to remedy the cause of the excess emissions, prevent a recurrence and limit the amount of the excess emissions.

It should be noted that this regulations does not relieve the source of its requirement under the Clean Air Act to not cause violations of the NAAQS at all times including periods of excess emissions regardless of cause.

In reply to the portion of the promulgated final rulemaking concerning excess emissions due to start-up, shutdown and malfunction, Kennecott Copper contended that this malfunction regulation was inconsistent with the malfunction regulations approved by the USEPA as a part of the state implementation plans (SIPs). During the same period of time, Bunker Hill Company which operates a smelter in Kellogg, Idaho was contesting the USEPA's January 22, 1976 proposed rulemaking (41 FR 3320) amending the Idaho SO2 Implementation Plan relating to the excess emissions due to start-up, shutdown and malfunction. Bunker Hill Company argued that the proposed regulation affecting their smelter was inconsistent with the malfunction regulations already approved by the USEPA as a portion of the SIPs of several of the western States. In reply to Kennecott Copper and the court remand of the malfunction regulation in the case of The Bunker Hill Company v. EPA (9th Cir., No. 75-3670), the USEPA on November 8, 1977 promulgated final rulemaking (42 FR 58171) on the Idaho SO2 Implementation

Plan regarding the Bunker Hill Company's Kellogg smelter. The USEPA's Acting Administrator as part of the final rulemaking committed the USEPA to continue its ongoing nationwide review of the States' malfunction regulations to assure consistency with this regulation (policy).

Briefly, the regulation for the Bunker Hill Company's Kellogg smelter defines all periods of excess emissions as violations of the applicable emissions standards and establish a procedure whereby the owner or operator of the Bunker Hill smelter may supply additional information to the Administrator. Although the information to be supplied is not limited in scope, the regulation does require that if information is given to the Agency, it include:

1. Identification of the emission point(s);
2. The magnitude of the excess emissions;
3. The identity of the process or control equipment causing the excess emissions;
4. The cause and nature of the excess emissions; and
5. A description of the steps taken by the owner or operator of the subject smelter to remedy the situation causing the emissions to prevent a recurrence and to limit the excess emissions. Finally, nothing in the regulation relieves the sources of its obligation to protect NAAOS for SO2 in its designated liability area nor precludes the Administrator from initiating at any time any appropriate actions under Sections 113, 119 and 303 of the Act.

During early 1978, the USEPA held workshops on the requirements for nonattainment area implementation plans. At these workshops the USEPA reiterated its position

on malfunction as detailed in Kennecott Copper (42 FR 58171) and Bunker Hill (42 FR 21372). Attached in Appendix B is a copy of the section of the workshop regarding malfunction. As additional guidance, the USEPA Region V sent each of the States in its region an example regulation on malfunction, attached in Appendix C. Also, Region V sent to each State in the region a copy of the March 13, 1979 letter to Mr. Jacob D. Dumelle, Chairman of the Illinois Pollution Control Board, regarding the USEPA malfunction policy, copy attached in Appendix D.

State Malfunction Policy Introduction

As an integral part of the 1979 SIP revisions as mandated by the 1977 amendments to the Clean Air Act, the States in Region V have submitted to the USEPA either new or modified malfunction regulations. Each of these regulations are in a different stage of review and approval by the USEPA. Each State's action is individually summarized in the following section.

Illinois

The Illinois Environmental Protection Agency (IEPA) proposed to revise rules 101, 103 and 105 of Chapter 2, Air Pollution (Permit Conditions and Maintenance Programs). Attached in Appendix E is a copy of the March 16, 1979 proposed revisions. To support the IEPA before the Illinois Pollution Control Board (IPCB), the USEPA sent Mr. Jacob Dumelle, Chairman of the IPCB, a letter summarizing the USEPA malfunction policy, copy attached in Appendix D. It was read into the record at one of the public hearings. During the public hearings, the IEPA modified their proposed revisions, copy attached in Appendix F. These proposed revisions were adopted by the IPCB on March 29, 1979 as an Interim Order. Then as required by Illinois law an economic impact analysis, Document Number 79/10, was done on the Interim Order by the Illinois Institute of Natural Resources. On July 2, 1979, the USEPA in proposed rulemaking on the Illinois SIP (44 FR 38595) stated that it would approve the March 29, 1979 Interim Order. As of November 7, 1980, the IPCB has not adopted a Final Order for these proposed revisions.

Indiana

The Indiana Air Pollution Control Board (IAPCB) added a new regulation, APC-11, Malfunction. On March 27, 1980 as a part of USEPA's proposed rulemaking on the Indiana SIP (45 FR 20432), the USEPA stated that the USEPA had reviewed this regulation and proposed to disapprove the regulation for the following deficiencies:

1. The regulation does not require that all excess emissions due to malfunctions be considered violations of the applicable standards. The source may demonstrate four criteria and then receives an automatic exemption for the excess emissions.
2. The regulation contains a provision, Section 5(a)(1), permitting fossil fuel steam generators to exceed the applicable sulfur dioxide emission limitation in no more than three 24-hour periods during any calendar month.

During the public comment period to the proposed rulemaking, the IAPCB indicated that it would remedy the second deficiency by removing that section from the regulation. On November 5, 1980, the IAPCB deleted Section 5(a)(1) thus satisfying the second deficiency. However, the IAPCB has not satisfied the first deficiency as of November 5, 1980. Attached in Appendix G is a copy of the proposed regulation, APC-11.

Michigan

The Michigan Department of Natural Resources proposed to their commission new regulations, R336.1911, Malfunction abatement plans, and R336.1912, Abnormal conditions and breakdown of equipment, copy attached in Appendix H. These regulations were adopted by the commission and forwarded to the USEPA for review as part of the SIP. After reviewing these regulations, the USEPA on August 13, 1979 proposed rulemaking on the SIP (44 FR 47350) of approving these regulations. On May 6, 1980, the USEPA gave final approval to these regulations in final rulemaking on the SIP (45 FR 29800).

Minnesota

The Air Quality Division of the Minnesota Air Pollution Control Board (MAPCB) has written a malfunction and breakdown regulation, APC-20, copy attached in Appendix I. The USEPA notified the MAPCB that the proposed regulation was acceptable to Region V and during the public hearings on July 23, 1979 the USEPA testified on behalf on the regulation. A copy of the testimony is given in Appendix J. At the conclusion of the public hearings, the hearing officer recommended that MAPCB and the industries get together to work out their differences and then have the MAPCB reintroduce the regulation for public hearings.

Ohio

During 1979, Ohio Environmental Protection Agency (OEPA) submitted to the USEPA a copy of the draft proposed revisions to regulation 3745-15-06, Malfunction of equipment; scheduled maintenance; reporting. The USEPA reviewed the submittal and notified OEPA of its comments. As of November 7, 1980, OEPA has not made a formal submittal to the USEPA for rulemaking.

Wisconsin

The Wisconsin Department of Natural Resources (WDNR) amended their regulation, NR 154.02, Applicability, delayed compliance, variance, and added regulation NR 154.06(9), Malfunction prevention and abatement plans. Attached in Appendix K, are regulations NR 154.02 and NR 154.06(9). The USEPA on April 4, 1980 (45 FR 22986) published proposed rulemaking on the implementation plan submittal including these regulations. The USEPA stated that the regulation, NR 154.02, should be modified so that the regulation explicitly declares that an excess emission caused by an equipment malfunction is a violation of the applicable regulation. As of November 7, 1980, the WDNR has not responded to the USEPA's comment.

Appendix A

Excerpt from the Ohio SO2 Implementation Plan (41 FR 36324) page 36326.

Malfunctions

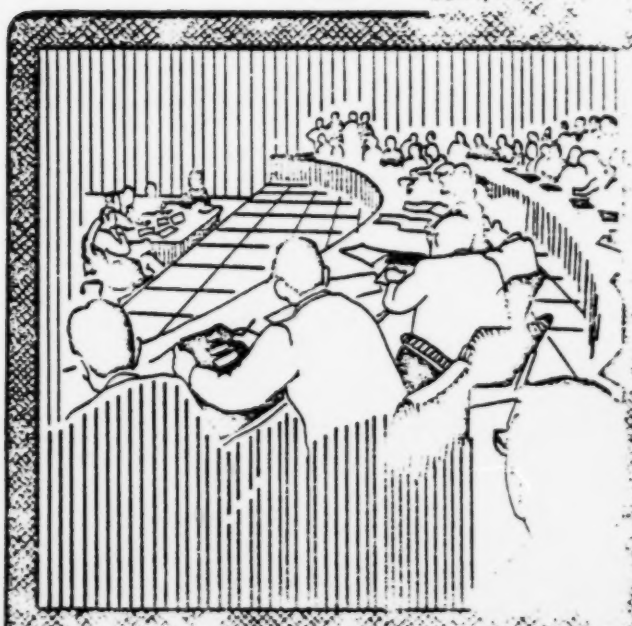
The proposed regulations did not include a section dealing with malfunctions, and the preamble requested comments on how the problem of malfunctions could be addressed. Several commentators offered sample regulations or suggested regulations presently utilized in other states as a means of dealing with the malfunction problem. After reviewing the comments, the Administrator has concluded that to penalize a prudent operator for emissions that are beyond his control is unreasonable. The issuance of an administrative order or the initiation of judicial action following a period of excess emission caused by circumstances beyond the control of the operator is not appropriate. However, automatic exemption for these periods of unavoidable excess emissions are also not appropriate.

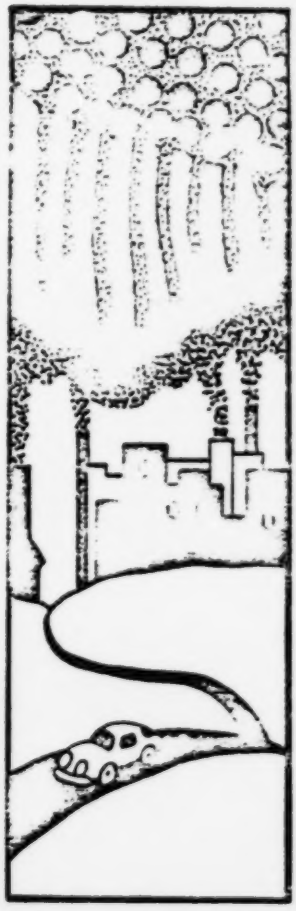
The Administrator recognizes that some relief should be afforded during certain upset conditions, but the promulgation of an upset regulation could serve as a disincentive to develop better operating and maintenance procedures. The Administrator has concluded that malfunctions and upsets beyond the reasonable control of an operator can be raised in the context of a Section 113 enforcement proceeding and prior to the issuance of an administrative order. When a Notice of Violation is issued to an operator for a violation resulting from a malfunction or upset condition, the Administrator will consider any information developed by the source which more fully explains the circumstances of the violation, its seriousness, and efforts of the operator to comply. If the Administrator determines that the subject equipment was well maintained and operated, was repaired expeditiously, and that excess emissions were minimized, no further action would be warranted. In the Administrator's view this approach both encourages good operating practice and provides a forum for mitigating evidence in the context of the Agency's enforcement process.

WORKSHOP ON REQUIREMENTS FOR NONATTAINMENT AREA PLANS

OAQPS No. 1.2-103
REVISED EDITION
APRIL 1978

UNITED STATES · ENVIRONMENTAL PROTECTION AGENCY





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MARCH 9 – 10, 1978

KANSAS CITY, MO.
MARCH 6 – 7, 1978

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NONATTAINMENT PLAN REVISIONS

MALFUNCTION AND EXEMPTION PROVISIONS

Several of the existing State implementation plans (SIP) provide for an automatic emission limitation exemption during periods of excess emissions due to start-up, shutdown, or malfunction. Generally, EPA agrees that the imposition of a penalty for sudden and unavoidable malfunctions caused by circumstances entirely beyond the control of the owner and/or operator is not appropriate under certain conditions. However, since the SIPs must provide for attainment and maintenance of the national ambient air quality standards, SIP provisions on malfunctions must be narrowly drawn. (SIPs may, of course, omit any provision on malfunctions.)

I. AUTOMATIC EXEMPTION APPROACH

If a nonattainment plan revision contains a malfunction provision, it cannot be the type that provides for automatic exemption where a malfunction is alleged by a source. Automatic exemptions might aggravate air quality so as to result in not providing for attainment of the ambient air quality standards as required by Section 172 of the Clean Air Act, as amended. Additional grounds for disapproving a SIP that includes the automatic exemption approach are discussed in more detail at 42 FR 58171 (November 8, 1977) and 42 FR 21372 (April 27, 1977). As a result, EPA will disapprove any nonattainment plan revision that provides for an automatic exemption in those instances where a source claims excess emissions were caused by start-up, shutdown, or malfunction.

II. ENFORCEMENT DISCRETION APPROACH--SIP EMISSION LIMITATION ADEQUATE TO ATTAIN AMBIENT STANDARDS

EPA could approve nonattainment plan submittals which incorporate the "enforcement discretion approach." Such plans could include a requirement that places the burden on the source of demonstrating to the appropriate State agency's satisfaction that the excess emissions though constituting a violation were due to an unavoidable malfunction. For nonattainment plan revisions that provide for attainment of the ambient air quality standards for a pollutant by 1982, any malfunction provisions must provide for the commencement of a proceeding to notify the source of its violation and to determine whether enforcement action should be undertaken for any period of excess emissions, whether due to malfunctions or otherwise. (The term "excess emission" means air emission rate which exceeds any applicable emission limitation.)

Commencement of such a proceeding could be by issuance of a notice of violation (or some equivalent State mechanism) with the source being provided the opportunity to establish that the violation was due to an unavoidable malfunction. The malfunction provision should provide that the burden is entirely upon the source to establish that the excess emissions resulted from a true malfunction. (A malfunction is defined as a sudden and unavoidable breakdown of process or air pollution control equipment.)

Based on information submitted by the source, the State must determine whether additional enforcement action is necessary. The following factors must, at a minimum, be considered:

1. The air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions;

2. Repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized to insure that such repairs were made as expeditiously as possible;

3. The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

4. All possible steps were taken to minimize the impact of the excess emissions on ambient air quality; and

5. The excess emissions are not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

The malfunction provision must provide that only if the State determines that each of these criteria are satisfied, no additional course of action could reasonably have been expected of the owner or operator. In such situations, the malfunction provision could provide that the State would not follow the initial notice of violation with any further enforcement action.

III. SOURCE DEMONSTRATION APPROACH--RACT LIMITATION NOT ADEQUATE TO ATTAIN AMBIENT STANDARDS

Section 172 requires that those nonattainment submittals for photochemical oxidants and carbon monoxide that will not be able to demonstrate attainment by December 31, 1982, must provide for implementation of all reasonably available control measures (RACT).

In a recent Federal court decision (Marathon Oil Co. v. EPA, ___F.2d___ (9th Cir., November 21, 1977) [a decision on malfunction provisions in certain water pollution requirements]), the court distinguishes requirements that are technology based (e.g., non-attainment plans based on RACT rather than attainment of ambient standards) from requirements that are health based (e.g., SIP emission limitations for attainment of the ambient standards). The enforcement discretion approach could be approved in RACT SIPs if modified as set forth below. A State may choose, however, as part of the RACT submittal not to provide a malfunction provision (i.e., Section 116). An acceptable malfunction provision for periods of excess emissions could require a source exceeding applicable emission limitations to report the five categories of information set forth in II above. The source could be given the opportunity to demonstrate that the excess emissions resulted from an unavoidable breakdown of process or control equipment, or from unavoidable production problems. Until such information is evaluated by the State, issuance of a notice of violation (or some equivalent State mechanism) would not be required. An approvable malfunction provision should specify that if the source does not sustain its burden of proof to the State's satisfaction, the excess emissions are a SIP violation and appropriate enforcement proceedings will be initiated by the State. If the source is able to demonstrate that the malfunction was genuinely unavoidable, it will not constitute a violation of the emission limitation.

It should be understood that if over a period of time, application of either the enforcement discretion approach or the source demonstration approach does not significantly curtail malfunctions to the extent that they are the cause of ambient violations, the malfunction portion of the SIP will either have to be further revised by the State or EPA will have to disapprove the SIP.

IV. PHASING IN AND OUT OF EQUIPMENT, ROUTINE MAINTENANCE, BYPASS PROVISIONS, AND PRODUCTION PROCESS EXCESS EMISSIONS

Any activity or event which can be foreseen and avoided, or planned falls outside of the definition of sudden and unavoidable breakdown of equipment. For example, a sudden breakdown which could have avoided by better maintenance procedures is not a malfunction. In such cases, the control agency must enforce for violations of the emission limitation. Two such common events are phasing in and out of equipment, and routine maintenance.

Phasing in and out of process equipment is part of the normal operation of a source and should be accounted for in the design and implementation of the operating procedure for the process and control equipment. Accordingly, it is reasonable to expect that careful planning will eliminate violations of emission limitations

during such periods. If excess emissions should occur during routine phasing in and out of such equipment, the excess emissions will not be considered as having resulted from a malfunction unless the source can demonstrate that such emissions were actually caused by a sudden and unforeseeable breakdown in the equipment.

Routine maintenance is a predictable event, which can be scheduled at the discretion of the operator, and which can therefore be made to coincide with maintenance on production equipment, or other source shutdowns. Most sources have the ability to build and maintain inventory upon which the source can draw during periods of shutdown for routine maintenance. Consequently, no excess emissions may be allowed for periods of routine maintenance.

It is recognized that in certain circumstances, it is necessary to bypass control equipment to avoid endangering life or sustaining severe property damage. Such bypassing will not be considered a violation of a RACT SIP under the source demonstration approach if the source sustains its burden of proof in the excess emissions report, but will be considered a violation of the attainment SIP under the enforcement discretion approach.

In addition to malfunctions, it is recognized that excess emissions may occasionally occur during normal production processes, even when the control equipment is well designed, operated and maintained. If the source can demonstrate, in its required excess emissions report, that it was operating the plant according to the above malfunction criteria, and that it was scheduling operations to preclude fluctuations, but that the emission limitation was nevertheless violated for production reasons beyond the control of the source, the excess emissions will not be considered a violation of the RACT SIP under the source demonstration approach, but will be considered a violation of the attainment SIP under the enforcement discretion approach.

MISCELLANEOUS PART 51 REQUIREMENTS--SUMMARY

1. § 51.4 Public hearings (also required under § 172(b)(1))--Before a State submits the plan, a compliance schedule or a plan revision to EPA, it must hold a public hearing on the plan, schedule, or revision. The State must also give proper public notice for the hearing at least 30 days prior to the hearing. Although this section specifies formal requirements for the notice and holding of public hearings, a State can obtain EPA approval to use alternative procedures that EPA deems adequate.

2. § 51.5 Submission of plans; preliminary review of plans--The State must submit at least five copies of the plan revision to the appropriate Regional Office.

3. § 51.19 Source surveillance--The plan must provide for monitoring the status of compliance with any rules and regulations that constitute the control strategy. As a minimum, the plan must provide--

--Procedures for requiring owners or operators of sources to maintain records of emissions and report periodically to the States;

--Periodic testing and inspection of sources;

--A system of detection of violations of rules and regulations through enforcement of a visible emission limitation and for investigating compliants;

--Procedures for obtaining and maintaining data on emissions reductions achieved through transportation control measures; and

--Procedures to require sources to install and use emission monitoring devices.

4. § 51.22 Rules and regulations--The State must adopt all rules and regulations necessary for attainment and maintenance of the national standard. The plan must contain copies of all such rules and regulations.

Appendix C

REGION V's EXAMPLE REGULATIONS ON MALFUNCTIONS

A. No source shall be operated unless the air pollution control device(s) and/or measures are also in operation simultaneously and are not bypassed, unless necessary to prevent damage to the control devices.

B. Definitions

(a) The term "excess emissions" means an emission rate which exceeds any applicable emission limitation prescribed by rule , NSPS, permit conditions, etc. The averaging time and test procedures for determining such excess emissions shall be as specified as part of the applicable emission limitation. Excess emissions during periods of routine phasing in or out of process equipment shall not be considered to be the result of a malfunction.

(b) The term "malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or a process to operate in a normal and usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

(c) The term "violation" means any incident of excess emissions regardless of the circumstances of the occurrence.

C. Malfunction Abatement Plans

(1) A person responsible for operation of a source of an air contaminant (not listed in rules through inclusively), shall prepare a malfunction abatement plan to prevent, detect and correct malfunctions or equipment failures resulting in emissions exceeding any applicable emission limitation.

(2) A malfunction abatement plan (required by rule) shall be in writing and shall as a minimum specify the following:

(a) A complete preventative maintenance program, including identification of the individual(s) responsible for inspecting, maintaining and repairing air cleaning devices, a description of the items or conditions that will be inspected, the frequency of these inspections or repairs, and an identification and quantities of the replacement parts which will be maintained in inventory for quick replacement.

(b) An identification of the source and air cleaning device operating variables and outlet variables (including opacity, grain loading, pollutant concentration, etc.) that will be monitored in order to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures and of informing operating personnel of any malfunction, including alarm

systems, lights and/or other indicators.

(c) A description of the corrective procedures that will be taken in the event of a malfunction or failure in order to achieve compliance with the applicable emission limits, opacity standards and equipment standards as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistent with safe operating procedures.

(3) A malfunction abatement plan (required by subrule (1)) shall be submitted to the agency upon request and shall be subject to review and approval by the agency. If in the opinion of the agency the plan does not adequately carry out the objectives (as set forth in subrules (1) and (2)), the agency may disapprove the plan, state its reasons for disapproval, and order the preparation of an amended plan within the time period specified in the order. If within the time period specified in the order an amended plan is submitted which in the opinion of the agency fails to meet the objective, the agency on its own initiative may amend the plan to cause it to meet the objective.

(4) Within 180 days after the effective date of this rule, a person responsible for the operation of the source shall implement the malfunction abatement plan (required by subrule (1)). Logs shall be maintained to show that the O & M plan is implemented faithfully. The log shall be subject to inspection by the agency or its representative, at any time upon written request.

D. Abnormal Conditions and Breakdown of Equipment

(1) The owner or operator of a source of emissions exceeding any applicable emission limit as a direct result of abnormal conditions in or breakdown of, process or control equipment shall promptly begin an investigation to determine the cause(s) of the excess emission and immediately initiate corrective procedures to achieve compliance with the applicable emission limits, opacity and equipment standards as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistant with safe operating procedures. If the excess emissions last for more than 2 hours or exceed 200 pounds, the owner or operator shall:

(a) Notify the agency as soon as is reasonably possible but not later than one working day subsequent to the start of malfunction.

(b) Submit to the agency in writing, within ten days, a detailed report including (but not limited to):

(i) identification of the sources, stacks, instrumentation and control devices involved in the malfunction;

(ii) time and duration of the violation;

(iii) estimate of the magnitude of the violation;

(iv) nature and probable causes of the violation; and

(v) all remedial action taken

(c) The preventative measures outlined in (b)(v) above will incorporated into any malfunction abatement plan required (by rule).

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST
CHICAGO, ILLINOIS 60604

Appendix D

MAR 13 1979

Mr. Jacob D. Dumelle
Chairman
Illinois Pollution Control Board
309 West Washington
Chicago, Illinois 60606

Dear Chairman Dumelle:

The United States Environmental Protection Agency (USEPA) policy on malfunction was stated in the Ohio Implementation Plan revisions for Sulfur Dioxide (41 FR 36324) and the Utah Implementation Plan for Sulfur Dioxide relating to Kennecott Copper Corporation's smelter located in Salt Lake City, Utah, (42 FR 21472). USEPA is currently reviewing all State Implementation Plans (SIPs) to verify conformance of the States' malfunction regulations with the policy.

Basic to USEPA's malfunction regulation policy is the fact that all excess emissions are violations of the applicable emission standards. However, USEPA doesn't desire to penalize a prudent operator for emissions that are beyond his control but would use enforcement discretion depending on the circumstances. At no time should there be automatic exemptions for periods of unavoidable excess emissions or can these emissions be tolerated if there is a violation of the ambient air quality standards. For incidences of unavoidable excess emissions, it is expected a source should take steps to minimize such excess emissions which would include a reduction in the level of operation and shutting down the operation unless such shutdowns would cause physical damage to equipment or disrupt essential community services. Sources should also bring the facility back into compliance on an expedited basis.

The USEPA policy is to have the source report all malfunctions. Immediately upon learning of a malfunction, the source would report to the States' appropriate agency the following minimum information about the malfunction:

1. Identification of the emission points
2. The magnitude of the excess emissions
3. The identity of the process or control equipment causing the excess emissions

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4. The cause and nature of the excess emissions

5. A description of the steps taken by the owner or operator to remedy the situation causing the emissions, prevent a recurrence and limit the excess emissions.

USEPA recognizes that incidences of excess emissions could be reduced by good operation and maintenance practice and a comprehensive preventive maintenance program. With these practices, existing control equipment will provide its maximum benefit. The policy outlined above is embodied in the attached, example regulation. The example regulation requires the source to have a malfunction abatement plan to be kept at the source and to be submitted to the agency for review only upon the agency's request.

It is not the intent of this regulation to have the State agency review all malfunction abatement plans. The regulation states that these plans will be reviewed only on a selective basis. We believe that this will conserve the agency's resources by subjecting to review only those malfunction plans of sources in which a malfunction could result in significant air quality impacts or whose operation and maintenance plan has not been functioning properly. USEPA believes that this approach is superior to the automatic review of all plans based on a minimum cutoff limit.

We encourage the State to adopt a regulation which would be consistent with the policy.

Sincerely yours,

Robert L. Dupree
Director
Air and Hazardous Materials Division

Attachment

REGION V's EXAMPLE REGULATIONS ON MALFUNCTIONS

A. No source shall be operated unless the air pollution control device(s) and/or measures are also in operation simultaneously and are not bypassed, unless necessary to prevent damage to the control devices.

B. Definitions

(a) The term "excess emissions" means an emission rate which exceeds any applicable emission limitation prescribed by rule , NSPS, permit conditions, etc. The averaging time and test procedures for determining such excess emissions shall be as specified as part of the applicable emission limitation. Excess emissions during periods of routine phasing in or out of process equipment shall not be considered to be the result of a malfunction.

(b) The term "malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or a process to operate in a normal and usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

(c) The term "violation" means any incident of excess emissions regardless of the circumstances of the occurrence.

C. Malfunction Abatement Plans

(1) A person responsible for operation of a source of an air contaminant (not listed in rules through inclusively), shall prepare a malfunction abatement plan to prevent, detect and correct malfunctions or equipment failures resulting in emissions exceeding any applicable emission limitation.

(2) A malfunction abatement plan (required by rule) shall be in writing and shall as a minimum specify the following:

(a) A complete preventative maintenance program, including identification of the individual(s) responsible for inspecting, maintaining and repairing air cleaning devices, a description of the items or conditions that will be inspected, the frequency of these inspections or repairs, and an identification and quantities of the replacement parts which will be maintained in inventory for quick replacement.

(b) An identification of the source and air cleaning device operating variables and outlet variables (including opacity, grain loading, pollutant concentration, etc.) that will be monitored in order to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures and of informing operating personnel of any malfunction, including alarm

systems, lights and/or other indicators.

(c) A description of the corrective procedures that will be taken in the event of a malfunction or failure in order to achieve compliance with the applicable emission limits, opacity standards and equipment standards as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistent with safe operating procedures.

(3) A malfunction abatement plan (required by subrule (1)) shall be submitted to the agency upon request and shall be subject to review and approval by the agency. If in the opinion of the agency the plan does not adequately carry out the objectives (as set forth in subrules (1) and (2)), the agency may disapprove the plan, state its reasons for disapproval, and order the preparation of an amended plan within the time period specified in the order. If within the time period specified in the order an amended plan is submitted which in the opinion of the agency fails to meet the objective, the agency on its own initiative may amend the plan to cause it to meet the objective.

(4) Within 180 days after the effective date of this rule, a person responsible for the operation of the source shall implement the malfunction abatement plan (required by subrule (1)). Logs shall be maintained to show that the O & M plan is implemented faithfully. The log shall be subject to inspection by the agency or its representative, at any time upon written request.

D. Abnormal Conditions and Breakdown of Equipment

(1) The owner or operator of a source of emissions exceeding any applicable emission limit as a direct result of abnormal conditions in or breakdown of, process or control equipment shall promptly begin an investigation to determine the cause(s) of the excess emission and immediately initiate corrective procedures to achieve compliance with the applicable emission limits, opacity and equipment standards as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistant with safe operating procedures. If the excess emissions last for more than 2 hours or exceed 200 pounds, the owner or operator shall:

(a) Notify the agency as soon as is reasonably possible but not later than one working day subsequent to the start of malfunction.

(b) Submit to the agency in writing, within ten days, a detailed report including (but not limited to):

(i) identification of the sources, stacks, instrumentation and control devices involved in the malfunction;

(ii) time and duration of the violation;

(iii) estimate of the magnitude of the violation;

(iv) nature and probable causes of the violation; and

(v) all remedial action taken

(c) The preventative measures outlined in (b)(v) above will incorporated into any malfunction abatement plan required (by rule).

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

Appendix E

IN THE MATTER OF:	)	
	)	
PROPOSED REVISIONS TO RULES 101, 103, AND 105 OF CHAPTER 2, AIR POLLUTION (PERMIT CONDITIONS AND MAINTENANCE PROGRAMS)	)	PCB R79-3 (Agency File #4780-F, I)

AMENDED PROPOSAL

The Environmental Protection Agency (the Agency) proposes the following amendments to Rules 101, 103 and 105 of the Board's Air Pollution Control Regulations. Language to be deleted is lined through; language to be added is underlined, except for the additions to Rule 101.

1. The Agency proposes that the following definitions be added to Rule 101 of Chapter 2 in their alphabetically appropriate positions:

   Excess Emissions: An emission rate that exceeds any standard or limitation set forth in Part II, IX, or X of Chapter 2. ~~or the current operating permit for the emission source.~~

   Malfunction: Any sudden and unavoidable failure of air pollution control equipment or process equipment or a process to operate in a normal and usual manner which result in excess emissions. Any failure that is caused entirely or in part by poor maintenance, careless operation, chronic or repeated overloading, lack of compliance with a required maintenance program, or any other preventable upset condition or preventable equipment breakdown shall not be considered a malfunction.

   Plant: Any building, structure or installation that contains an emission source and which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control).

   Startup: The setting into operation of any air pollution control equipment or process equipment for any purpose, except routine phasing in of process equipment. Any requirement contained in these Rules applicable to startups shall also apply to shutdowns.

   Shutdown: The cessation of operation of any air pollution control equipment or process equipment for any purpose, except routine phasing out of process equipment. Any requirement contained in these Rules applicable to startups shall also apply to shutdowns.

2. The Agency proposes that Rule 103(b) be amended to provide as follows:

(b) (1) - (2) Stet

(3) Application.

(A) An application for an operating permit shall contain, as a minimum, the data and information specified in paragraph (a)(2) of this Rule 103. Each application shall list all individual emission sources for which a permit is sought. Any applicant may seek to obtain from the Agency a permit for each emission source, or such emission sources as are similar in design or principle of operation or function, or for all emission sources encompassed in an identifiable operating unit. To the extent that the above specified data and information has have previously been submitted to the Agency pursuant to this Rule 103, the data and information need not be resubmitted; provided, however, that the applicant must certify that the data and information previously submitted remains true, correct and current. An application for an operating permit shall contain a description of the startup procedure for each emission source, the duration and frequency of startups, the types and quantities of emissions during startup, and the applicant's efforts to minimize any such startup emissions, duration of individual startups, and frequency of startups. The Agency may adopt procedures which require data and information in addition to and in amplification of the matters specified in the first sentence of this paragraph (b)(3), which are reasonably designed to determine compliance with the Act, this Chapter, and ambient air quality standards, and which set forth the format by which all data and information shall be submitted. ~~Such procedures and formats, and revisions thereto, shall not become effective until filed with the Index Division of the Office of the Secretary of State as required by "An Act concerning administrative rules," approved June 14, 1951, as amended.~~

(B) The applicant shall submit to the Agency with the application for operating permit an outline of an operation and maintenance program that meets the requirements of Rule 103(b)(9)

(i) if the applicant requests permission under Rule 105(b) to operate the emission source during any malfunction; and if the plant at which the emission source is located has the capability to emit any specified air contaminant, at maximum rated capacity and in the absence of air pollution control equipment, at a rate of more than 100 tons per year, or 1,000 pounds per day or 100 pounds per hour;

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(ii) if, based on past operations, the Agency determines that it is necessary for the applicant to prove that the emission source will not have excess emissions for the period of the operating permit; or

(iii) if uncontrolled emissions released from the emission source constitute an immediate or acute danger to health.

The outline of the operation and maintenance program shall briefly set out that program, the location at the source or plant where the program will be available, and the organizational position of the person responsible for the program's implementation.

(4) - (5) Stet

(6) Standards for Issuance. No operating permit shall be granted unless the applicant submits proof to the Agency that:

(A) - (G) Stet

(H) the applicant has submitted, where applicable, an outline of an operation and maintenance program that meets the requirements of Rule 103(b)(9).

(b) (7) Conditions

(A) The Agency may impose such conditions in an operating permit as may be necessary to accomplish the purposes of the Act, and as are not inconsistent with the regulations promulgated by the Board thereunder. Except as herein specified, nothing in this Chapter shall be deemed to limit the power of the Agency in this regard.

(B) ~~When deemed appropriate as a condition to the issuance of an operating permit,~~ The Agency shall may require that the permittee maintain the air pollution control equipment covered by the permit in accordance with any operation and maintenance program prepared by the permittee in accordance with Rule 103(b)(9). To assure that such an operation and maintenance program is ~~planned~~ followed the Agency may require that the permittee keep such maintenance records as are necessary to demonstrate compliance with this condition of the operating permit. ~~provided, however, the Agency shall not have the authority to approve the maintenance program required thereunder.~~

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All such maintenance records shall be made available to the Agency upon request at any reasonable time.

(8) Stet

(9) Operation and Maintenance Programs. ~~The Agency shall approve an operation and maintenance program only if it includes the following.~~

(A) If the circumstances identified in Rule 103(b)(3)(B)(i), 103(b)(3)(B)(ii), or 103(b)(3)(B)(iii) are present, the Agency shall require that the permittee establish and carry out an operation and maintenance program which shall include the following, where applicable:

(i) A ~~summary~~ description of the preventive maintenance program for the source, including identification of the positions of persons responsible for inspecting, maintaining and repairing the air pollution control equipment, a listing of the items or conditions that will be inspected, the frequency of these inspections or repairs, and identification of the replacement parts essential to operation of the air pollution control equipment in accordance with its operating permit, which will be either maintained in inventory for quick replacement or available from a repair facility or supplier within 24 hours;

(ii) Identification of the source and air pollution control equipment operating variables that will be monitored in order to detect a malfunction or failure, the normal operating range or these variables, and identification of the method of monitoring or surveillance procedures; and

(iii) Identification of corrective procedures that will be taken in the event of a malfunction or failure in order to achieve compliance with the applicable emission limits as expeditiously as possible.

(B) The Agency may require the submittal of an entire operation and maintenance program for a determination that such program is in accordance with this rule if:

(i) the outline as submitted indicates that the program may be inadequate,

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(ii) inspection of the plant or source or review of the program in the field indicates that the program may be inadequate, is not available as stated in the outline or that there is no person with responsibility for its implementation, or

(iii) if malfunction, breakdown or startup problems repeatedly occur meriting such a requirement.

3. The Agency proposes that Rule 105 be amended to provide as follows:

Rule 105: Malfunctions, Breakdowns, Startups or Shutdowns

(a) Prohibition.

(1) No person shall cause or allow the continued operation of an emission source during malfunction or breakdown of the emission source or related air pollution control equipment if such operation would cause ~~a violation of the standards or limitations set forth in Part 2 II, IX or X of this Chapter,~~ excess emissions unless the current operating permit granted by the Agency provides for operation during a malfunction or breakdown, and the emission source is being operated in compliance with all conditions in the current operating permit concerning malfunctions.

(2) No person shall cause or allow excess emissions ~~violation of the standards or limitations or limitations set forth in Part 2 of this Chapter~~ during startup unless the current operating permit granted by the Agency provides for excess emissions ~~violation of such standards or limitations~~ during startup and the emission source is being operated in compliance with all conditions in the current operating permit concerning startups.

(3) In the following townships, no person shall replace the air pollution control equipment on any source of particulate matter with a less effective kind of control equipment:

Cook - All townships
~~Lake---Shields, Waukegan and Warren~~
~~DuPage---Addison, Winfield and York~~
Will - DuPage, Plainfield, Lockport, Joliet, Channahon, Peotone, and Florence
~~Peoria---Richwoods, Limestone, Hollis and Peoria~~
~~Tazewell---Pondulae, Pekin, Cincinnati, Groveland and Washington~~
Macon - Decatur and Hickory Point
~~Rock Island---Blackhawk, Coal Valley, Hampton, Moline, South Moline, Rock Island and South Rock Island~~

March 16, 1979

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~~LaSalle---Deer-Park,-LaSalle,-Peru-and-Utica~~
Madison - Alton, Chouteau, Collinsville, Edwardsville, Fort Russell, Godfrey, Granite City, Nameoki, Venice and Wood River
~~St.-Clair---Canteen,-Caseyville,-Centreville,-St.-Clair,-Stites,-Steckey,-Sugar-Loaf-and-Millstadt~~

(b) Contents of Request for Permission to Operate During a Malfunction, Breakdown or Startup.

(1) A request for permission to continue to operate during a malfunction or breakdown, if desired, shall be included as an integral part of the application for an operating permit pursuant to Rule 103, and shall include as a minimum: a ~~full-and-detailed~~ an explanation of why such continued operation is necessary; the anticipated nature, sources and quantities of emissions which will occur during such continued operation; the anticipated length of time during which such operation will continue; measures, such as use of off-shift labor or equipment which will be taken to minimize the quantity of air contaminant emissions and length of time during which such operation will continue.

When excess emissions ~~the-standards-or-limitations-of-Part-2-of-this-Chapter-will~~ be ~~violated~~ caused during startup, a request for permission to ~~violate-such-standards-or-limitations~~ cause such excess emissions shall be an integral part of the application for an operating permit pursuant to Rule 103, and shall include, as a minimum: a description of the startup procedure for each emission source, the duration and frequencies of such startups, the types and quantities of emissions during such startups, and the applicant's efforts to minimize any such startup emissions, duration of individual startups, and frequency of startups.

(2) The Agency may adopt procedures which require data and information in addition to or in amplification of the matters set forth in paragraph (b)(1) of this Rule 105, and which sets forth the format in which all data and information shall be submitted. ~~Such-procedures-and-formats,-and-revisions-thereto,-shall-not-become-effective-until-filed-with-the-Index-Division-of-the-Office-of-the-Secretary-of-State-as-required-by-"An-Act-concerning-administrative-rules,"-approved-June-14,-1951,-as-amended.~~

(c) Standards for Granting Permission to Operate During a Malfunction, Breakdown or Startup. No person shall cause or allow excess emissions except as provided for in an operating permit and subject to the provisions of Rule 105(e).

(1) Permission shall not be granted to allow continued operation during a malfunction or breakdown unless the applicant submits proof to the Agency that: such continued operation is necessary to prevent injury to persons or severe damage to equipment; or that such continued operation is required to provide essential services; provided, however, that continued operation solely for the economic benefit of the owner or operator shall not be a sufficient reason for granting permission.

(2) Permission shall not be granted to allow excess emissions ~~violation of the standards or limitations of Part 2 of this Chapter or~~ during startup unless the applicant has affirmatively demonstrated that all reasonable efforts have been made to minimize startup emissions, duration of individual startups, and frequency of startups.

(d) Records and Reports. Any person who causes or allows the continued operation of an emission source ~~during a malfunction or breakdown of the emission source or related air pollution control equipment~~ when such continued operation would cause excess emissions, shall, if the excess emissions last for more than 2 hours and exceed 200 pounds, or if the excess emissions include any air contaminant which may constitute an immediate or acute danger to health:

(1) Notify the agency as soon as is reasonably possible but not later than one working day subsequent to the start of malfunction.

(2) Submit to the agency in writing, within ten working days, a report including:

(A) identification of the sources, stacks, instrumentation and control devices involved in the malfunction;

(B) time and duration of the excess emissions;

(C) estimate of the magnitude of the excess emissions;

(D) nature and probable causes of the excess emissions; and

(E) remedial action taken.

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(e) Deleted

(e)~~(f)---Effect-of-Granting-of-Permission-to-Operate~~ Effect of Operating During a Malfunction, Breakdown or Startup as a Defense to an Enforcement Action.

(1) The granting of permission to operate during a malfunction or breakdown, or to ~~violate-the-standards-or-limitations-of-Part-2-of-this-Chapter~~ cause excess emissions during startup and full compliance with any terms and conditions connected therewith, shall be a prima facie defense to an enforcement action alleging a violation of paragraph (a) of this Rule 105 but shall not be a defense to an enforcement action alleging a violation of the emission and air quality standards of this Chapter, and of the prohibition of air pollution during the time of such malfunction, breakdown, or startup.

(2) It shall be a defense to an enforcement action alleging a violation of any applicable emission or air quality standard or of the prohibition of air pollution, during malfunction or startup if the owner or operator of the emission source demonstrates that:

(A) The air pollution control equipment, process equipment, and processes have been operated

(i) in full compliance with an operation and maintenance program which meets the requirements of Rule 103(b)(9), where applicable, and

(ii) to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions;

(B) Repairs were made promptly when the operator knew or should have known that applicable emission limitations were or were likely to be exceeded. The use of off shift labor and overtime shall be evidence of expeditious repair efforts;

(C) The amount and duration of excess emissions (including any bypass) were minimized as much as possible during periods of such emissions;

(D) All reasonable steps were taken to minimize the effect of the excess emissions on ambient air quality; and

(E) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance.

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March 16, 1979

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ILLINOIS POLLUTION CONTROL BOARD
March 29, 1979

Appendix F

IN THE MATTER OF:	)	
	)	
PROPOSED REVISIONS TO RULES 101, 103, and 105 OF CHAPTER 2, AIR POLLUTION (PERMIT CONDITIONS AND MAINTENANCE PROGRAMS)	)	R79-3

INTERIM ORDER OF THE BOARD (by Mr. Goodman):

In order to meet the federal deadline for submittal of State Implementation Plan revisions pursuant to the Clean Air Act, 42 U.S.C. §7401 et seq. (1977), the Board hereby proposes the following amendments to Rules 101, 103 and 105 of Chapter 2: Air Pollution Regulations. The Board orders that the Hearing Officer set further hearings or set aside time during the economic impact hearings to receive testimony on these proposed amendments. These proposed amendments are not a final action in this matter for any purpose.

PROPOSED ORDER

1. It is proposed that the following definitions be added to Rule 101 in their alphabetically appropriate positions:

Excess Emissions: Emissions that exceed any standard or limitation set forth in Part II, IX, or X of Chapter 2.

Malfunction: Any sudden and unavoidable failure of air pollution control equipment or an emission source to operate in a normal and usual manner.

Breakdown: Any failure of air pollution control equipment or an emission source to operate in a normal and usual manner if such failure is caused entirely or in part by poor maintenance, careless operation, chronic or repeated overloading, lack of compliance with a required maintenance program, or any other preventable upset condition or preventable equipment failure.

Startup: The setting into operation of any air pollution control equipment or an emission source for any purpose, except routine phasing in of process equipment. Any requirement contained in these Rules applicable to startups shall also apply to shutdowns.

Shutdown: The cessation of operation of any air pollution control equipment or an emission source for any purpose, except routine phasing out of process equipment. Any requirement contained in these Rules applicable to startups shall also apply to shutdowns.

2. Rule 103 - It is proposed that Rule 103(b)(7) be amended as follows:

Rule 103(b)(7) Conditions. The Agency may impose conditions in an Operating Permit as may be necessary to accomplish the purposes of the Act, and as are not inconsistent with the regulations promulgated by the Board thereunder. Except as herein specified, nothing in this Chapter shall be deemed to limit the power of the Agency in this regard. ~~When deemed appropriate as a condition to the issuance of an Operation Permit, the Agency may require that the permittee adequately maintain the air pollution control equipment covered by the permit. To assure that such a maintenance program is planned, the Agency may require that the permittee have a maintenance program and keep such amintenance records as are necessary to demonstrate compliance with this Rule, provided, however, the Agency shall not have the authority to approve the maintenance program required thereunder.~~

3. Rule 105 - Delete the current Rule 105 and substitute the following:

Rule 105: Maintenance, Malfunctions, Breakdowns, Startups and Shutdowns

(a) Prohibition

(1) No person shall cause or allow the continued operation of an emission source during breakdown of the emission source or related air pollution control equipment if such operation would cause excess emissions.

(2) No person shall cause or allow the continued operation of an emission source during malfunction of the emission source or related air pollution control equipment if such operation would cause excess emissions unless the conditions prescribed in paragraphs 105(c), Records and Reports, and 105(d), Operation during Malfunction, Startup or Shutdown, are met.

(3) No person shall cause or allow excess emissions during startup or shutdown unless the current

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operating permit granted by the Agency provides for excess emissions during startup or shutdown and the emission source is being operated in compliance with all conditions in the current operating permit concerning startups or shutdowns. When the standards or limitations of Part 2 of this Chapter 2 will be violated during startup, a request for permission to violate such standards or limitations shall be an integral part of the application for an Operating Permit pursuant to Rule 103 and shall include, as a minimum: a description of the startup procedure for each emission source, the duration and frequencies of such startups, the types and quantities of emissions during such startups and the applicant's efforts to minimize any such startup emissions, duration of individual startups, and frequency of startups.

(4) In the following townships, no person shall replace the air pollution control equipment on any source of particulate matter with a less effective kind of control equipment:

Cook - All townships
Will - DuPage, Plainfield, Lockport, Joliet, Peotone, and Florence
Macon - Decatur and Hickory Point
Madison - Alton, Chouteau, Collinsville, Edwardsville, Fort Russell, Godfrey, Granite City, Namecki, Venice and Wood River

(b) Maintenance. Every owner or operator of an emission source or air pollution control equipment shall maintain such source or equipment in accordance with a maintenance program. Such program shall be designed to prevent a breakdown which could lead to excess emissions and to minimize excess emissions to the maximum extent practicable if a malfunction or breakdown occurs. The owner or operator shall inform the Agency of the person or persons responsible for administering the maintenance program and upon request shall describe the program to the Agency; provided, however, that the Agency shall not have the authority to approve the maintenance programs required by this paragraph. Every owner of an emission source or air pollution control equipment shall comply with this paragraph within 90 days of [the effective date of this Rule].

(c) Records and Reports. Any person who causes or allows the continued operation of an emission source during a malfunction of the emission source or related air pollution control equipment when such continued operation causes excess emissions shall, if the excess emissions last for more than 2 hours and exceed 200 pounds or if the excess emissions include any air contaminant which may constitute an immediate or acute danger to health:

(1) Notify the Agency as soon as is reasonably possible but not later than one working day subsequent to the start of the malfunction; and

(2) Submit to the Agency in writing, within ten working days, a report including:

(A) identification of the sources, stacks, instrumentation and control devices involved in the malfunction;

(B) time and duration of the excess emissions;

(C) estimate of the magnitude of the excess emissions;

(D) nature and probable causes of the excess emissions;

(E) a description of the steps taken by such person to remedy the situation causing the excess emissions, prevent a recurrence, and limit the excess emissions; and

(F) a statement of the reasons why such continued operation was necessary to prevent injury to persons or severe damage to equipment or to provide essential services.

(d) Operation during Malfunction, Startup or Shutdown. It shall be a defense to an enforcement action alleging a violation of any applicable emission limitation or air quality standard that:

(1) the violation occurred as a result of a malfunction, startup or shutdown;

(2) the emission source and air pollution control equipment have been operated in accordance with the maintenance program required by Rule 105(b);

(3) repairs were made promptly when the operator knew or should have known that applicable emission limitations were or were likely to be exceeded;

(4) the amount and duration of excess emissions (including any bypass) were minimized as much as practicable during periods of such emissions;

(5) All reasonable steps were taken to minimize the effect of the excess emissions on ambient air quality;

(6) the excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance; and

(7) continued operation during the malfunction was necessary to prevent injury to persons or severe damage to equipment or to provide essential services; provided, however, that continued operation solely for the economic benefit of the owner or operator shall not be sufficient.

Mr. Young and Mr. Dumelle concur.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Interim Order was adopted on the 29th day of March, 1979 by a vote of 5-0.

Christan L. Moffett, Clerk
Illinois Pollution Control Board

AIR POLLUTION CONTROL BOARD
OF THE STATE OF INDIANA

REGULATION APC 11

MALFUNCTIONS

This is a new regulation promulgated pursuant to the authority granted in IC 13-1-1 and IC 13-7, establishing a reporting procedure for malfunctions, a maintenance program requirement for emission control equipment and facilities and a malfunction emission reduction program.

Section 1. Definitions

(a) Definitions applicable to this regulation are set forth in Regulation APC 1.

Section 2. Applicability

(a) The requirements of this regulation shall apply to the owner or operator of any facility which has the potential to emit 25 pounds per hour of particulates, 100 pounds per hour of volatile organic compounds or SO_2, or 2,000 pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

Section 3. Reporting

(a) A record shall be kept of all malfunctions, including startups or shutdowns of any facility or emission control equipment which result in violations of applicable air pollution control regulations or applicable emission limitations and such records shall be retained for a period of three years and shall be made available to the Board upon request. When a malfunction of any facility or emission control equipment occurs which lasts more than one hour, said condition shall be reported to the Technical Secretary or his appointed representative. Notification shall be made by telephone or telegraph, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence. Failure to report a malfunction of any emission control equipment subject to the requirements of this regulation shall constitute a violation of this regulation and any other applicable regulations. Information of the scope and expected duration of the malfunction shall be provided including the following:

(1) Identification of the specific emission control device to be taken out of service, as well as the location and permit number of such equipment.

(2) The expected length of time that the emission control equipment will be out of service.

(3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.

(4) Any measures such as the use of off-shift labor on equipment that will be utilized to minimize the length of the shutdown period.

(5) Any reasons that shutdown of the facility operation during the maintenance period would be impossible for the following reason:

(i) Continued operation is required to provide essential services, provided, however, that continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason;

(ii) Continued operation is necessary to prevent injury to persons or severe damage to equipment.

(6) A demonstration that interim control measures have reduced or will reduce emissions from the facility during the shutdown period.

Section 4. Maintenance

(a) Any person responsible for operating any facility subject to Section 2(a) of this regulation shall prepare and maintain a preventative maintenance plan including the following information:

(1) Identification of the individual(s) responsible for inspecting, maintaining and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.

(3) Identification and quantification of the replacement parts which will be maintained in inventory for quick replacement.

(b) Preventative maintenance plans shall be submitted to the Board upon request and shall be subject to review and approval by the Board. As deemed necessary by the Board, any person operating a facility shall comply with the requirements of Subsection (a) above.

(c) Facility owners or operators shall be responsible for operating and maintaining all emission control equipment and combustion or process equipment or processes in compliance with all applicable rules and regulations of the Board. Emissions temporarily exceeding the standards which are due to malfunctions of facilities or emission control equipment shall not be considered a violation of the regulations; provided the source demonstrates that:

(1) All reasonable measures were taken to correct, as expeditiously as practicable, the conditions causing the emissions to exceed the allowable limits, including the use of off-shift and over-time labor, if necessary.

(2) All possible steps were taken to minimize the impact of the excessive emissions on ambient air quality which may include but not be limited to curtailment of operation and/or shutdown of the facility.

(3) Malfunctions have not exceeded 5%, as a guideline, of the normal operational time of the facility.

(4) The malfunction is not due to the negligence of the operator.

(d) No facility shall be operated unless the air pollution control device(s) and measures are also in operation simultaneously and are not bypassed, unless necessary to prevent damage to equipment or injury to persons or unless there is a malfunction and the requirements set forth in Subsection (c) above are met.

(e) Correction - Excessive emissions shall be brought into compliance with all practicable speed, and appropriate action, including those set forth above, to correct the conditions causing such emissions to exceed applicable limits; to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. These actions shall be initiated as expeditiously as practicable.

Section 5. Board Action

(a) The Board may consider the following guidance in determining cases of excessive malfunctions. Where records show that repeated malfunctions exceed 5% of the normal operational time for any one control device or combustion or process equipment, the Board may require that the maintenance program be improved or that the defective or faulty equipment or emission control device be replaced. The Board may require curtailment of operation of a facility if the owner or operator of the facility or emission control device cannot demonstrate that for the most recent 12-month period the facility and/or the emission control device has operated in compliance with the applicable Indiana Air Pollution Control regulations at least 95% of the operating time of said equipment, except for electric utility steam generating units which shall comply with the following requirement for sulfur dioxide emissions only.

(1) Any owner or operator of an electric utility steam generating unit capable of combusting more than 73 megawatts (MW) heat input (250 million BTU/hour) of fossil fuel may operate said facility so that the applicable sulfur dioxide emission limitations may be exceeded up to three 24-hour periods during any calendar month; however, the sulfur dioxide

emissions must be reduced to less than 25 percent of the potential combustion concentration (75 percent reduction) at all times. This includes the periods when the emission limitation is being exceeded. Malfunctions should not exceed 5% of the normal operational time of the control device or combustion or process for the most recent 12 month period.

Section 6. Malfunction Emission Reduction Program

(a) Any owner or operator of a facility which has the potential to emit concentration in excess of the concentrations stated in Section 2(a) of this regulation shall submit within 180 days after the effective date of this regulation a malfunction emission reduction program. Said program shall include, but not be limited to, the normal operating emission rate and the program proposed to reduce emissions in the event of a malfunction to an emission rate which will not contribute to the cause of the violation of the ambient air quality standards established in Regulation APC 14. The program shall be based on the best estimates of type and number of startups, shutdowns, and malfunctions experienced during normal operation of the facility or emission control device and the scope and duration of such conditions.

(1) Said program may be subject to review and approval by the Board.

Section 7. Force and Effect

Any emission limitation or control strategy set forth in Regulation APC 3 promulgated October 7, 1974, which is revised or replaced by a corresponding emission limitation or control strategy in this regulation shall remain in force and effect until the emission limitation or control strategy set forth herein becomes legally enforceable and binding under Indiana law for affected facilities and sources.

Section 8. Severability

If any section, paragraph, sentence, clause, phrase, or word of this regulation, or any other part thereof, is declared unconstitutional or invalid for any reason, the remainder of said regulation shall not be affected thereby and shall remain in full force and effect.

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Appendix H

State of Michigan

PART 9. EMISSION LIMITATIONS AND PROHIBITIONS--MISCELLANEOUS

R 336.1911. Malfunction abatement plans.

Rule 911. (1) Upon request of the commission, a person responsible for the operation of a source of an air contaminant shall prepare a malfunction abatement plan to prevent, detect, and correct malfunctions or equipment failures resulting in emissions exceeding any applicable emission limitation.

(2) A malfunction abatement plan required by subrule (1) shall be in writing and shall, at a minimum, specify all of the following:

(a) A complete preventative maintenance program, including identification of the supervisory personnel responsible for overseeing the inspection, maintenance and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of these inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.

(b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.

(c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

(3) A malfunction abatement plan required by subrule (1) shall be submitted to the commission and shall be subject to review and approval by the commission. If, in the opinion of the commission, the plan does not adequately carry out the objectives as set forth in subrules (1) and (2), the commission may disapprove the plan, state its reasons for disapproval, and order the preparation of an amended plan within the time period specified in the order. If, within the time period specified in the order, an amended plan is submitted which, in the opinion of the commission, fails to meet the objective, the commission, on its own initiative, may amend the plan to cause it to meet the objective.

(4) Within 180 days after the commission approves a malfunction abatement plan, a person responsible for the preparation of a malfunction abatement plan shall implement the malfunction abatement plan required by subrule (1).

R 336.1912. Abnormal conditions and breakdown of equipment.

Rule 912. The owner or operator of a source of emissions exceeding any applicable emission limit as a direct result of abnormal conditions in, or breakdown of, process or control equipment continuing for more than 2 hours shall do both of the following:

(a) Notify the commission or the air quality division as soon as is reasonably possible.

(b) Submit to the commission, in writing, within 10 days, a detailed report, including probable causes, duration of violation, remedial action taken, and what steps are being undertaken to prevent a reoccurrence. These preventative steps shall become a part of any malfunction abatement plan required by rule 911.

State of Minnesota Appendix I

May 8, 1979

APC-20 Malfunctions and Breakdowns

A. Definitions. As used in this rule the following words shall have the meanings defined herein.

1. "Breakdown" means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal and usual manner.

2. "Excess emissions" means an emission rate which exceeds any applicable standard of performance prescribed by Minnesota Pollution Control Agency Rules, or which violates any condition in a permit.

3. "Malfunction" means any failure of air pollution control equipment or process equipment to operate in a normal and usual manner which is caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable process equipment failure.

4. "Potential to emit" means the capability at maximum capacity to emit an air pollutant in the absence of air pollution control equipment. Air pollution control equipment includes control equipment which is not, aside from air pollution control laws and rules, vital to production of the source or to its normal operation. Annual potential shall be based on the maximum

annual rated capacity of the source, unless the source is subject to enforceable permit conditions which limit the hours of operation. Enforceable permit conditions on the type or amount of materials combusted or processed may be used in determining the potential emission rate of a source.

5. "Process equipment" means any equipment which is a part of an emission facility which may upon malfunction or breakdown cause excess emissions to occur.

B. Startup and Shutdown

Excess emissions during periods of routine startup or shutdown of an emission facility shall not be considered to be the result of a malfunction.

C. Standard for Control Equipment Availability

No person shall operate an emission facility unless the air pollution control equipment is also in proper operation and is not bypassed, unless the control equipment is bypassed only to prevent damage to the control equipment or unless a bypass is specifically allowed in a permit. No person shall operate an emission facility unless the applicable control measures or process equipment for abatement of the emissions therefrom as specified in the permit application, permit, or applicable rule are being followed, or are in operation.

D. Enforcement

Excess emissions during malfunction or breakdown are a violation of the applicable limitation, and the owner or operator of the emission facility that is causing the excess emissions is subject to appropriate enforcement action.

E. Maintenance and Abatement Plan

1. Plan. An owner or operator of an emission facility with potential to emit more than 500 tons per year from the emission facility shall prepare, implement, and submit a maintenance and abatement plan to prevent, detect, and correct malfunctions and breakdowns of control equipment and process equipment. The owner or operator of an emission facility with potential to emit less than or equal to 500 tons per year shall prepare, have available, and implement a maintenance and abatement plan, and may be required to submit the plan to the Agency upon request by the Director. Criteria upon which the Director will rely in determination of the need to submit a maintenance and abatement plan are (1) Excessive malfunctions and breakdowns resulting in excess emissions, (2) Failure to prepare maintenance and abatement plan, (3) Failure to do adequate maintenance and abatement, (4) Failure to report malfunctions and breakdowns, (5) Ambient air violations in the vicinity of and to which the source is contributing.

2. Contents of Plan. The maintenance and abatement plan shall be in writing and shall as a minimum specify the following:

a. A complete preventive maintenance program for avoidance of excess emissions including identification of the individual(s) responsible for inspecting, maintaining, and repairing the process equipment and control equipment, a description of the equipment that will be inspected, the frequency of these inspections or repairs, and an identification and quantities of the replacement parts which will be maintained in inventory for quick replacement.

b. An identification of operating conditions and outlet variables (such as opacity, grain loading, pollutant concentration, and pressure drop across collector) for the process equipment and control equipment that will be monitored in order to detect a malfunction or breakdown, and the normal operating range of these variables, and a description of the method of detecting and of informing operating personnel of any malfunction or breakdown, including alarm systems, lights, and other indicators.

c. A description of the corrective procedures that will be taken in the event of a malfunction or breakdown in order to achieve compliance with the applicable emission limitations and permit conditions as expeditiously as possible, including but not limited to reducing production.

d. A description of the procedures that will be taken in the event of a malfunction or breakdown in order to limit excess emissions as much as possible, including but not limited to reducing production.

e. A statement(s) of the time period(s) that would be required to safely shut down the emission facility or portion thereof causing excess emissions.

f. A description of the records that will be kept to show that the plan is implemented.

g. Any other reasonable and pertinent information that may be required by the Director.

3. Records. The owner or operator of an emission facility who is required to prepare a maintenance and abatement plan shall maintain records to show that the plan is implemented. The records shall include at least, the times and dates of inspections, the inspection results, any recommendations, and any action taken as response to recommendations. The records shall be subject to inspection by the Agency and shall be maintained for two years following the date of such recording.

4. Submission of Plan. The owner or operator of an emission facility who is required to submit a maintenance and abatement plan shall submit the plan as part of the permit

application for the emission facility. The owner or operator of an emission facility who has an operating permit for the emission facility on the effective date of this rule shall submit the maintenance and abatement plan when a request for reissuance of the permit is submitted or upon request of the Director, whichever comes first.

5. Permit. No permit shall be issued or reissued unless the owner or operator who is required by this rule to do so, has submitted a maintenance and abatement plan that meets the requirements of this rule.

F. Breakdown or Malfunction of Control Equipment or Process Equipment.

The owner or operator of an emission facility where excess emissions occur as a direct result of a malfunction or breakdown of process equipment or control equipment shall:

1. Promptly begin an investigation to determine the cause(s) of the excess emissions;

2. Immediately initiate corrective procedures to achieve compliance with the applicable emission limitations and permit conditions as expeditiously as possible;

3. Notify the Agency immediately of the malfunction or

breakdown;

4. Submit to the Agency in writing, within ten days after the beginning of the excess emissions, a report containing the following information:

a. Identification of the process equipment, stacks, instrumentation, and control equipment involved in the malfunction or breakdown;

b. Time and duration of the excess emissions;

c. Estimate of the amount of excess emissions;

d. Nature and causes of the malfunction or breakdown;

e. All remedial action taken to bring the emission facility into compliance with the applicable emission limitations, and measures taken to limit excess emissions as much as possible.

5. The owner or operator of an emission facility who used remedial measures outlined in E.4.e. shall incorporate such remedial measures into the maintenance and abatement plan required in this rule.

G. Cessation of Operation During Malfunction or Breakdown

The Director may order cessation of operation of all or part of the entire emission facility if necessary to preserve public health and welfare. The Director shall consider quantity and quality of emission, what portion of the emission facility would have to be shut down, cause of breakdown or malfunction, length of time needed to correct, and other factors affecting the public and the owner or operator of the emission facility.

H. Revocation of Operating Permit

No person shall operate an emission facility which has an unreasonable malfunction or breakdown frequency of control equipment or process equipment. In addition to any other reason provided by law, the Director may modify or revoke the operating permit of the owner or operator of an emission facility upon, (1) failure to submit an acceptable maintenance and abatement plan, (2) failure to abide by the maintenance and abatement plan, (3) failure to notify the Agency of malfunctions or breakdowns, (4) excessive periods of excess emissions due to breakdowns or malfunctions.

Appendix J

Testimony of Henry Onsgard
to the State of Minnesota
July 23, 1979

Good Morning Ladies and Gentlemen

My name is Henry Onsgard. I am employed as a Physical Scientist in the Technical Analysis Section, Air Programs Branch, Air and Hazardous Materials Division, United States Environmental Protection Agency (USEPA) Region V. My principal duties are technical review of applications submitted under the Prevention of Significant Deterioration of Air Quality Regulations (PSD), State Implementation Plans, including State regulations, and air quality redesignations.

I am here today to testify on behalf of the USEPA and at the request of Minnesota Pollution Control Agency (Agency) on the proposed Rule APC-20, Malfunction and Breakdown. It should be noted that the USEPA has defined the words malfunction and breakdown just the reverse of the Agency. This is only semantics. However, when I am referring to USEPA publications, I will use USEPA definitions to be consistant with the reference; otherwise, I shall try to use the Agency's definitions.

The USEPA Region V's policy on malfunction was stated in the Ohio Sulfur Dioxide Plan (41 FR 36324, August 27, 1976). The general USEPA malfunction policy has been stated in the Utah Sulfur Dioxide Control Strategy as it related to the Kennocott Copper Corporation smelter located in Salt Lake City, Utah (42 FR 21472, April 27, 1977) and in Idaho Sulfur Dioxide Control Strategy as it related to the Bunker Hill Company smelter located in Kellogg, Idaho (42 FR 58171, November 8, 1977).

In light of the Kennocott Copper Corporation's case challenging the USEPA promulgated malfunction regulation for their smelter, the USEPA committed itself to review all State's malfunction regulations for their adequacy and consistancy with the Utah Kennocott Copper promulgated malfunction regulation. In the Idaho Bunker Hill promulgation, the USEPA indicated that it was already undertaking such a review. This review has continued as the USEPA Region V evaluates all of the States Implementation Plans (SIPs) to verify conformance of the State's Malfunction regulations with the USEPA malfunction policy.

Basic to the USEPA malfunction policy is the fact that all excess emissions are violations of the applicable emission standards (the same way that excess speed on the highway is a violation). However, the USEPA doesn't desire to penalize a prudent operator for emissions that are beyond his control but would use enforcement discretion depending on the circumstances. This position was detailed in the Idaho Bunker Hill promulgation that stated:

> "The Agency (USEPA) believes the procedure best-suited to accomplishing the goal of excusing unavoidable malfunctions without undermining the impetus towards sound operating and maintenance procedures is to allow the source to show, after an episode of excess emission, that the violation was due to an unavoidable malfunction. Whether further enforcement would follow such a notice would be a matter of enforcement discretion resulting from an evaluation of that showing."

In other words, at no time shall there be automatic exemptions from enforcement for periods of unavoidable excess emissions or can these emissions be tolerated if there is an exceedance of the national ambient air quality standards. For incidences of unavoidable excess emissions, it is expected that a source should take steps to minimize such excess emissions which would include reducing the level of operation and/or shutting down the operation unless such shutdowns would cause physical damage to equipment or disrupt essential community services. Sources should also bring the facility back into compliance on an expedited basis. The USEPA policy is to have the source report all excess emissions and malfunctions. Immediately upon learning of a malfunction, the source would report to the Minnesota Pollution Control Agency the following minimum information about the malfunction:

1. Identification of the emission points.
2. The magnitude of the excess emissions.
3. The identification of the process or control equipment causing the excess emissions.
4. The cause and nature of the excess emissions.
5. A description of the steps taken by the owner or operator to remedy the situation causing the emissions, prevent a recurrence and limit the excess emissions.

In addition, USEPA recognizes that incidences of excess emissions could be reduced by good operation and maintenance practices and a comprehensive preventive maintenance program. With these practices, existing control equipment will provide its maximum benefit.

A comprehensive preventive maintenance program is to help ensure that the air pollution control equipment is being operated at its optimum. Part of a comprehensive preventive maintenance program is routine external surveillance and periodic internal inspection. Routine external surveillance can help detect possible problems through recording and analyzing operating parameters such as pressure drop, opacity, scrubbant flow, vibrations, ductwork condition, etc. For specific operation and maintenance procedures, the operator should refer to the owner's manual provided by the manufacturer of his equipment.

USEPA encourages Minnesota to adopt a malfunction regulation consistent with the policy.

State of Wisconsin

NR 154.02 is amended to read:

NR 154.02 Applicability, delayed compliance, variances.

(1) APPLICABILITY. The provisions of this chapter govern the release of air contaminants to the ambient air and the regulation of air contaminant sources by the department.

(2) DELAYED COMPLIANCE ORDERS. The department may, by order issued under section 144.35(1)(b), Wis. Stats., authorize a source not in compliance with an emission limitation prescribed in this chapter after ~~July 31, 1975,~~ to expire on the date stated in the order~~,~~ if it determines that ~~NR 154.09(1),~~ ~~Wis. Adm. Code,~~ applies and that all the conditions ~~listed in such rule~~ and hereunder are met~~:~~ to achieve compliance as expeditiously as practicable but not later than three years after such requirement became applicable. The department shall hold a public hearing in accordance with its rules prior to ~~granting~~ any such ~~deferral which exceeds 90 days in total duration and shall not, without the express approval of a majority of the natural resources board, grant any deferral which exceeds one year in total duration~~ authorizing any period of delayed compliance which exceeds 30 days in duration. ~~Prior to authorizing any such deferral, the department shall determine~~ No such order shall be issued unless:

(a) The cause of the violation was a ~~mechanical breakdown,~~ malfunction, equipment failure, act of God, or some other condition beyond the entity's control~~,~~, when using all prudent planning;

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(b) The air contaminant source is located so that it will not delay attainment or affect maintenance of an ambient air quality standard at any point beyond the property line of the entity;

(c) Good faith efforts have been made to comply with this chapter; ~~and the cause of noncompliance could not have been forestalled by normal maintenance procedures (including advanced purchase of inventory and replacement parts);~~

~~(d) If the source is a new source, the cause of the violation was a mechanical breakdown or act of God which was demonstrably beyond the entity's control when using all prudent planning;~~ If the violation was caused by a malfunction or equipment failure, any plan required to be prepared by NR 154.06(9) was complied with;

(e) The air contaminant for which a deferral is sought is not a hazardous pollutant for which an emission standard has been established by the administrator of the U.S. environmental protection agency~~.~~;

(f) The conditions listed in NR 154.09(1), if applicable, are met;

(g) The order contains:

1. An express provision whereby the order recipient consents to its issuance;

2. A requirement that the order recipient employ reasonable emission monitoring techniques to assess compliance with any interim requirements imposed by the order;

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3. A requirement for submittal of reports showing whether any interim requirements, increments of progress, and final compliance have been achieved;

4. A provision prohibiting the reduction of employe wages where supplemental, intermittent or other dispersion-dependent control methods are to be used;

5. In the case of a major stationary source, a notice that it may be required to pay administrative noncompliance penalties for failure to comply with the order and that no order issued under this subsection shall be effective until it is approved by the administrator of the U.S. environmental protection agency or his designee.

~~(3)~~ (h) All reasonably available alternative operating procedures and interim control measures to minimize emissions shall be utilized by the air contaminant source during the period of ~~any allowed exemption~~ delayed compliance.

(3) RACT VARIANCES. (a) The department may grant source-specific revisions to the state implementation plan setting alternate compliance schedules or alternate emission limitations, or both, where compliance with general RACT requirements of this chapter are shown to be technologically or economically infeasible, provided that:

1. The revision will not delay attainment or prevent maintenance of any ambient air quality standard, as determined by methods acceptable to the department.

2. Construction or modification of the air contaminant source for which a revision is requested was commenced on or before July 1, 1979.

3. The owner or operator of the air contaminant source for which a revision is requested demonstrates that all direct or portable sources owned or operated in the state by such person are in compliance with all applicable requirements of this chapter or are on a schedule for compliance with such requirements.

4. The owner or operator submits to the department information concerning the conditions or special circumstances which demonstrates, to the department's satisfaction, that the applicable general RACT requirements from which variance is sought are technologically or economically infeasible. In addition,

a. Where an alternate compliance schedule is sought, the owner or operator shall submit a proposed schedule which demonstrates reasonable further progress and contains a date for final compliance as soon as practicable.

b. Where alternate emission limitations are sought, the owner or operator shall submit proposed emission limitations.

c. Requests for revisions shall be signed by the principle executive officer; partner; sole proprietor; or principal governmental executive or elected official or a duly authorized representative, as appropriate.

d. Requests shall contain other relevant information as required by the department.

(b) The department, in acting upon any request for a revision under this subsection, shall:

1. Act on requests for revisions within three months of the filing of a completed request.

2. Offer, through public notice, the opportunity for public comment including, where requested, a public hearing.

3. State in writing the reasons for denying, granting, or for granting in modified form any request.

(c) The department may, after notice and opportunity for hearing, revoke or modify any revision when:

1. Any term or condition of the revision has been violated;

2. Changes in ambient air quality indicate that the source has a significant advetse impact on the attainment or maintenance of any ambient air quality standard; or

3. The owner or operator did not act in good faith in demonstrating the technological or economic infeasibility of compliance with the general RACT requirements or in submitting other relevent information in support of the revision request.

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(d) When the department grants, modifies or revokes a source-specific revision to a general RACT requirement which has been approved by the administrator of the U.S. environmental protection agency as part of the state implementation plan, such revision shall not become effective until:

1. It has been submitted to the administrator pursuant to applicable law, including but not limited to 42 U.S.C. 7410, as amended, and 40 CFR Parts 51 and 52, as amended, and all such requirements have been met, and

2. It has been approved by the administrator or his designee as a revision to the state implementation plan.

(4) ALTERNATE FUEL VARIANCES. The department may grant temporary variances from the emission ~~limits~~ limitations of this chapter to air contaminant sources which request such variances in order to switch from a regular ruel to an alternate fuel which is in more plentiful supply, provided that the conditions of this subsection are met.

(a) If the office of state planning and energy has certified that a switch from the fuel regularly used by the applicant to an alternate fuel would cause an emission ~~limit~~ limitation to be exceeded is needed to protect public health, safety or welfare in the applicant's part of the state, the department may grant a temporary variance from ~~emission limits~~ such requirements provided that:

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1. The applicant has submitted a list of steps which will be implemented without delay to minimize adverse effects caused by the switch in fuels permitted by the variance, including all feasible steps to minimize use of the alternate fuel through energy conservation and other measures; and

2. The applicant has provided, or has agreed to provide within 5 days after the date the variance is granted, information on the type, quantity and quality of fuel and rate of consumption in use before and to be used after the switch in fuels; and

3. Granting the variance would be unlikely to cause or exacerbate a violation of any primary ambient air quality standard; and

4. Litigation for violation of an emission ~~limit~~ limitation prescribed in this chapter or an ambient air quality standard prescribed in Wis. Adm. Code chapter NR 155 is not presently pending; and

5. The applicant has agreed to submit no later than 90 days from the date that the variance is granted a plan and time schedule for preventing the recurrence of the conditions which necessitated a variance request; and

6. The applicant submitted and implemented in good faith any plan required to be submitted as a condition to a previously-granted variance; and

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7. After July 1, 1978, if the applicant uses natural gas or distillate oil as a regular fuel, the applicant has submitted and received department approval of a plan to minimize dependence on these fuels while complying with the emission ~~limits~~ limitations of this chapter.

(b) If the office of state planning and energy has not certified that a switch in fuels is needed, the department may grant a temporary variance from the emission ~~limits~~ limitations of this chapter only if the conditions of (4)(a)1. through 7. are met and the applicant has submitted documentation of the unavailability of the fuel regularly used and of any alternate fuel which the air contaminant source has the capability to burn in compliance with emission ~~limits~~ limitations.

(c) When granting a variance is likely to cause a secondary standard (but not a primary standard) to be violated or exacerbated, the following conditions shall apply:

1. The variance must specify an expiration date no later than 45 days from the date the variance is granted.

2. Prior to granting a variance extension which expires on a date more than 45 days after the date the variance was originally granted, the department shall:

a. Determine either that the applicant's regular fuel is unavailable or that certification by the office of state planning and energy of the need for a switch in fuels in the applicant's part of the state remains in effect; and

b. Evaluate through ambient air quality monitoring and/or dispersion modeling the air quality impact of granting the variance and determine that maintenance of the primary standards is not being endangered; and

c. Solicit and consider public comment on permitting the extension.

(d) When granting a variance is unlikely to cause any ambient air quality standard to be violated, the following conditions shall apply:

1. The variance must specify an expiration date no later than 60 days from the date the variance is granted.

2. Prior to granting a variance extension which expires on a date more than 60 days after the date the variance was originally granted, the department shall:

a. Determine either that the applicant's regular fuel is unavailable or that certification by the office of state planning and energy of the need for a switch in fuels in the applicant's part of the state remains in effect; and

b. Evaluate through ambient air monitoring and/or dispersion modeling the air quality impact of granting the variance. If the evaluation indicates that maintenance of the air standards is not being endangered, an extension may be

granted. If the evaluation indicates that a secondary air standard has been or may be violated, the procedure set forth in subsection (4)(c)2. shall apply.

(e) The Department may rescind or amend a variance granted under NR 154.02(4) at any time.

(5) The issuance or granting of any order or variance under subsection (2), (3), or (4) shall not relieve any person of the duty to comply with all other applicable federal, state and local laws and rules.

(9) MALFUNCTION PREVENTION AND ABATEMENT PLANS.

(a) The owner or operator of any direct or portable source which may emit hazardous substances or emits more than 15 pounds in any day or 3 pounds in any hour of any air contaminant for which air standards have been adopted shall prepare a malfunction prevention and abatement plan to prevent, detect and correct malfunctions or equipment failures which may cause any emissions limitation to be violated or which may cause air pollution. The plan shall be in writing, updated as needed, and shall include:

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing the air pollution control equipment.

2. The maximum intervals for inspection and routine maintenance.

3. A description of the items or conditions that will be checked.

4. A listing of materials and spare parts that will be maintained in inventory.

5. An identification of the source and air pollution control equipment operation variables that will be monitored in order to detect a malfunction or failure; the correct operating range of these variables; and a description of the method of monitoring or surveillance procedures, or a reference to specific pages containing this information in manuals or other documents kept by the owner or operator.

6. A description of the corrective procedures that will be taken in the event of a malfunction or failure in order to achieve and maintain compliance with the applicable emission limitations as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistent with safe operating procedures.

7. Such other information as the department shall deem pertinent.

(b) The department may order any owner or operator to submit the plan required by par. (a) for review and approval. The department may amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions during malfunctions.

(c) No owner or operator shall fail to carry out a plan required under part. (a) or as amended under par. (b).